

Marshall Garland

Quantitative Social Scientist

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I am a senior research scientist and a member of the firm's management team. I support the recruitment, supervision, professional development and training of our quantitative researchers, while also serving as the lead quantitative researcher and methodological advisor for most research and evaluation projects. I am also part of the team that supports the business development efforts of the research and evaluation group. As an applied social scientist, my primary research interests lie in using administrative data to answer applied research questions using statistical models, with a particular focus on postsecondary readiness and outcomes. Most of my statistical work is quasi-experimental or descriptive, though I have increasingly been involved in the design and execution of randomized controlled trials. Some of my recent projects include:

- Lead quantitative researcher for an Institute for Education Sciences (IES) funded Regional Educational Laboratory Southwest (RELSW) study examining the predictors of Hispanic students' success accessing, persisting, and completing college;
- Co-principal investigator and lead quantitative researcher of a RELSW study examining disparities in access to and participation in advanced STEM coursework in high school, which was covered by [Education Week](#);
- Senior researcher and methodological advisor for a multi-site cluster-randomized controlled trial of a project-based learning approach to teaching Advanced Placement Physics and Government;
- Lead methodologist for a national study of students' online civic reasoning, which was covered by the [Washington Post](#) and [MSNBC](#), and is forthcoming in *Educational Researcher*;
- Co-principal investigator and lead quantitative researcher for a study of women's access and success in Science, Technology, Engineering, and Math (STEM) coursework in college;
- Co-principal investigator and lead quantitative researcher for statewide, quasi-experimental evaluation of an online supplementary education platform that met Every Student Succeeds Act (ESSA)'s **Moderate** evidence standards;
- Lead quantitative researcher for a quasi-experimental evaluation of a higher education professional development intervention that met ESSA's **Moderate** evidence standards;
- Lead psychometrician on two statewide surveys in Texas and New Hampshire using the National Center for Special Education Accountability Monitoring instrument for measuring parental involvement;
- Lead quantitative researcher of a randomized controlled trial of a new method for preparing teachers of English language learners;
- Co-principal investigator or lead quantitative researcher for multiple statewide evaluations of programs designed to improve teacher quality and ensure student access to high-quality instruction;
- Lead quantitative researcher for a study of the impact of standardized test design on the statistical properties of student growth measures;
- Co-principal investigator and lead quantitative researcher for an evaluation of a program to reduce discipline disproportionality in a large urban Texas school district.

Education

- 2008 **A.B.D.**, *Texas Tech University*, Lubbock, Texas, *Department of Political Science*.
Concentration in Political Economy, Econometrics, and Research Methodology
- 2003 **M.A.**, *St. Mary's University*, San Antonio, Texas, *Department of Political Science*.
International Relations
- 2000 **B.A.**, *University of Texas at San Antonio*, San Antonio, Texas, *Department of Political Science*.
Political Science and French
- 2004 **Summer School in Social Science Data Analysis**, *University of Essex*, Essex, United Kingdom.
Statistical models for limited and categorical variables

Professional Positions

- 2012-Current **Senior Research Scientist**, *Gibson Consulting Group*, Austin, Texas.
Current Projects:
- Co-principal investigator of a Regional Education Southwest project examining school turnaround grants in Texas;
 - Lead quantitative researcher on a Regional Education Southwest project tracing the transitions of Texas special education graduates into college using Texas' state longitudinal data system;
 - Senior researcher and methodological adviser on a multi-site cluster randomized trial of a Project-Based Learning intervention in five large urban school districts in the United States. Partnership between Lucas Education Research, University of Southern California, Penn State University, and Gibson Consulting Group;
 - Principal investigator of an evaluation of a school redesign grant in a large urban Texas school district;
 - Co-principal investigator of a statewide evaluation of Texas' Career and Technical Education program;
 - Lead methodologist for a randomized controlled trial of a teacher training program for teachers of English language learners, in partnership with Southern Methodist University.
- 2011-2012 **Research Scientist**, *Edvance Research*, San Antonio, Texas.
- 2010-2011 **Research Scientist**, *Texas Schools Project*, Austin, Texas.
- 2006-2011 **Evaluator**, *Austin Independent School District*, Austin, Texas.

Software and Programming Experience

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|------------------------------------|---|
| Regular and advanced | Stata |
| Intermittent and project dependent | L ^A T _E X, HTML, WinSteps, R, integration of Stata, L ^A T _E X and HTML for facilitating reproducible research, and for mass producing customized reports, Jupyter, GitHub, Python |
| Irregular | Tableau, Javascript, CSS, cURL, NVivo, Dedoose, SPSS |

Statistical Expertise

Most of my statistical training is in econometrics, with a focus on methods for panel data for continuous and limited outcomes (e.g., random and fixed effects models) and analyses of time-series data (e.g., Autoregressive-Moving Average Processes (ARMA), detection and resolution of trending and seasonality processes). Since transitioning into education research, my work has involved estimating treatment effects with observational data and non-equivalent groups. Methods I have used for this purpose include event-study designs, usually paired with matching (e.g. coarsened-exact matching, post-processing using propensity scores with a matching algorithm or inverse probability of selection weighting, and multivariate distance matching). I also regularly fit linear and generalized linear mixed models. An additional area of interest is in psychometrics and assessing measurement validity and reliability, particularly with survey data. I have used Stata and WinSteps to fit IRT models for existing validated instruments and newly developed ones.

Selected Peer Reviewed and non-Peer Reviewed Reports

- 2021 Anna Rosefsky Saavedra, Ying Liu, Shira Korn, Amie Rapaport, **Marshall Garland**, Danial Hoepfner, Kari Lock Morgan, and Alyssa Hu. *Knowledge in Action Efficacy Study Over Two Years*, February 2021.
- 2021 Joel Breakstone, Mark Smith, Sam Wineburg, Amie Rapaport, Jill Carle, **Marshall Garland**, and Anna Saavedra. *Students' Civic Online Reasoning: A National Portrait*. Education Researcher (forthcoming), 2021.
- 2020 Trey Miller, **Marshall Garland**, and Dean Gerdeman. *College Enrollment and Completion among Texas High School Graduates with a Disability*. (REL 2021–043). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest, November 2020.
- 2020 Lauren Cassidy, **Marshall Garland**, Deborah Jonas, and Louise Yarnall. Statewide evaluation of Career and Technical Education programs: Final report. (Prepared for the Texas Education Agency). Austin, TX. SRI Education and Gibson Consulting Group, Inc., February 2020.
- 2018 **Marshall Garland**, Eric Both, and Ali Taylan. *An Examination of Metrics of Educational and Workforce Success*. (Prepared for the Greater Texas Foundation). Austin, TX. Gibson Consulting Group, August 2018.
- 2018 Joseph Shields, **Marshall Garland**, Sarah Cannon, Eric Booth, and Christine Pham. *Charter Authorizer Accountability Report*. (Prepared for the Texas Education Agency). Austin, TX. Gibson Consulting Group, October 2018.
- 2018 Amie Rapaport, **Marshall Garland**, Jill Carle, and Sarah Cannon. Evaluation of Project CONNECT: Interim report. (Prepared for Southern Methodist University). Austin, TX. Gibson Consulting Group, November 2018.
- 2017 **Marshall Garland** and Joseph Shields. The Community College STEM Pathway: A Study of Women in Engineering and Computer Science. (Prepared for Society for Women in Engineering). Austin, TX. Gibson Consulting Group, Inc., June 2017.
- 2017 **Marshall Garland** and Amie Rapaport. *Advanced course offerings and completion in science, technology, engineering, and math in Texas public high schools*. (REL 2018–276). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest, October 2017.
- 2017 Trisha Borman, Jonathan Margolin, **Marshall Garland**, Amie Rapaport, So Jung Park, and Christina LiCalsi. *Associations between predictive indicators and postsecondary science, technology, engineering, and math success among Hispanic students in Texas*. (REL 2018–279). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest, November 2017.
- 2016 Alexandra Manzella Kistner, Ryan Williams, Benjamin West, Lauren Clymer, Alexandra Anastos, David Manzeske, **Marshall Garland**, Amie Rapaport, and Shana Shaw. Evaluation of the Cohort 3 Texas Teacher Incentive Fund Program in Region 18 campuses: 2014–15. (Prepared for the Texas Center for Educator Effectiveness). Austin, TX. American Institutes for Research and Gibson Consulting Group, Inc., June 2016.
- 2016 Deborah Jonas and **Marshall Garland**. Relationship between high school grade point average and enrollment in credit-bearing courses in college. (Presentation prepared for Virginia Community College System). Austin, TX. SRI International and Gibson Consulting Group, Inc., September 2016.

- 2015 **Marshall Garland**, Joseph Shields, Shana Shaw, Eric Booth, and Karin Samii-Shore. **Texas SUCCESS Comprehensive Evaluation Report**. (Prepared for the Texas Education Agency). Austin, TX. Gibson Consulting Group, Inc., December 2015.
- 2014 Reyda Taylor, Karin Samii-Shore, **Marshall Garland**, Greg Gibson, and Amie Rapaport. Evaluation of the Austin Independent School District's Disciplinary Alternative Education Program. (Prepared for the Austin Independent School District). Austin, TX. Shore Research and Gibson Consulting Group, Inc., August 2014.
- 2013 **Marshall Garland**. Investigation of the feasibility of removing the Student Growth Percentile reporting restriction for consecutive Advanced Proficient scores. (Presentation prepared for Pearson Education and the Virginia Department of Education). Gibson Consulting Group Inc., December 2013.
- 2012 **Marshall Garland**, Jason LaTurner, Angelica Ware Herrera, Deborah Jonas, and Chrys Dougherty. **High School Predictors of College Readiness: Determinants of High School Graduates' Enrollment and Successful Completion of First-Year Mathematics and English College Courses in Virginia**. (Prepared for the Virginia Department of Education). Austin, TX. Texas Schools Project, ACT, May 2012.
- 2009 Jeffrey Edwards and **Marshall Garland**. An evaluation of the effects of major trading partner growth using a GMM system. *Applied Economics Letters*, 16(7):657–661, April 2009.
- 2008 **Marshall Garland** and Glen Biglaiser. Do electoral rules matter?: Political institutions and foreign direct investment in latin america. *Comparative Political Studies*, 42(2):224–251, February 2008.
- 2008 **Marshall Garland**. **Determinants of Postsecondary Enrollment: Evidence from the AISD Class of 2017**. Austin Independent School District. Austin, TX, November 2008. Winner of the AERA Division H Award for Advances in Methodology.
- 2007 Jeffrey Karp and **Marshall Garland**. Ideological ambiguity and split ticket voting. *Political Research Quarterly*, 60(2):722–732, December 2007.

Conference Presentations

AERA **2020, 2019, 2018**.

SREE **2016**.

References

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SRI International

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